

### REMARKS

This is in response to the Office Action mailed July 15, 2003. In that Office Action, Claim 3 was objected to for lack of subject/verb agreement.

Claims 1-5 were rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention.

Claims 1-5 were rejected under 35 USC §112, first paragraph, as failing to comply with the written description requirement; and

Claims 1-5 were rejected under 35 USC §112, first paragraph, because the specification was deemed enabling only for selecting "Duroc" pigs with an increased likelihood of having thinner backfat thickness.

Applicants confirm the election of Claims 1-5 made in the previous response. Accordingly, Claims 6-12 are being canceled from this application. Applicants reserve the right to pursue these claims in further divisional applications.

Turning now to the rejections under 35 USC §112, second paragraph, Claims 1, 3, 4 and 5 have been amended by replacing the word "thin" with the word "thinner." Thus, with this amendment, it should now be clear that pigs carrying the

genotype recited in Claim 1 have a thinner backfat thickness than those not carrying the genotype.

Claims 1, 3, 4, and 5 have also been amended by replacing the phrase "characterized by" with the word "at." With this amendment, the rejection discussed at the bottom of page 3 and top of page 4 of the Office Action is overcome.

Regarding the Examiner's rejection of Claims 1-5 on the grounds that the recitation "position 393 of the 5'-flanking region of porcine HSP70.2 gene" is indefinite because "neither the claims nor the specification provide a reference from which to begin counting so as to arrive at the 393 position", Applicants respectfully submit that the sequence of the 5'-flanking region of the porcine HSP70.2 gene and polymorphisms are well known. For example, the sequence has been disclosed in "Polymorphism in the 5' flanking region of the porcine heat shock protein 70.2 genes," Animal Genetics 31:410-411 (2000), and in "Complete nucleotide sequence of a porcine HSP70 gene," Immunogenetics, 35:286-289 (1992), copies of which are enclosed with the accompanying Information Disclosure Statement. In addition, the sequence can be accessed through the NCBI Genbank Accession No. AF139178. For these reasons, Applicants respectfully submit that the HSP70.2 gene with polymorphisms is known and, therefore, that the descriptions provided in the specification are sufficient and adequate.

Claim 5 has also been amended by including the language "and a polymorphism at nucleotide position 345". It is believed that this amendment overcomes, the specific rejection of Claim 5 on the grounds of indefiniteness.

Turning now to the rejection under 35 USC §112, paragraph 1, it is the position of the Patent Office that the specification fails to meet the written description requirement. As set forth above, the claimed method is characterized by the novel association between certain polymorphisms in the 5'-flanking region of porcine HSP70.2 gene and the thickness of pig backfat. As discussed above, the sequence of the 5'-flanking region of porcine HSP70.2 gene and the polymorphisms have been previously disclosed in, for example, Animal Genetics 31:410-411 (2000). (Moreover, the sequence can be accessed through the NCBI Gen Bank Accession No. AF139178). It is proper to rely on these publicly available sources for the disclosure of the HSP70.2 gene and polymorphism.

Claims 1-5 were rejected under 35 USC §112, first paragraph, because it was deemed that the specification while enabling for a method of selecting "Duroc" pigs with increased likelihood of having thinner backfat thickness, the application did not provide enablement for methods for selecting pigs with thinner backfat thickness from any type of breed. Accordingly, Applicants have amended Claim 1 to recite a method for selecting

"Duroc" pigs with thinner backfat thickness. As a result, Claim 2 has been canceled. Applicants submit that by this Amendment, the rejection based on 35 USC §112, for lack of enablement has been overcome.

Finally, in further support of the amended claims, presented herewith is the Declaration of Dr. En-Chung Lin (one of the inventors named in the present application). As set forth in the Declaration and demonstrated by the accompanying data, the mutation sites all show a significant, albeit different, influence on backfat thickness. For the sake of brevity, Dr. Lin's statements are not repeated here but are, instead, incorporated by reference.

Applicants submit that the pending claims, 1 and 3-5, are now in condition for allowance. Reconsideration and allowance of such claims are respectfully requested.

Respectfully submitted,



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